

Exhibit A



THE UNIVERSITY OF KANSAS HEALTH SYSTEM

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Dr. Stephen Thornton, M.D. Summary and Expert Opinion

In Regards to Robert Steven Cutler, et al. v. Sheriff Mark Napier, et al.

I, Stephen Thornton, MD, have been asked to render an opinion regarding the matter of Robert Steven Cutler, et al. v. Sheriff Mark Napier, et al.

By way of background, I am board certified in both emergency medicine and medical toxicology. I have had an active clinical practice in emergency medicine since 2005 and in medical toxicology since 2012. My current clinical practice in emergency medicine is at the University of Kansas Hospital in Kansas City, KS. I am an associate professor of emergency medicine and a core faculty member for the University of Kansas Emergency Medicine Residency. In addition, I am a fee basis emergency medicine physician at the Kansas City VA Hospital in Kansas City, MO. I have also worked in the emergency departments of three other

large academic medical centers (the University of California – San Francisco – Fresno, Truman Medical Center, Kansas City, MO, and the University of California – San Diego). In my role as a emergency medicine physician I frequently care for patients with delirium from multiple causes. I use ketamine in my clinical practice and have published on the topic in the medical literature. During my career I have cared for patients suffering from environmental emergencies such as heat stroke. I also sit on a physician advisory board for a large emergency medical service that is tasked with reviewing and approving protocols including those on the management of excited delirium.

My active clinical practice in medical toxicology at both the University of Kansas Hospital in Kansas City, KS and the Children's Mercy Hospital in Kansas City, MO. I see patients at the bedside at both facilities who have delirium from multiple causes. I am also the medical director of the University of Kansas Health System Poison Control Center and care for multiple poisoned patients, including many with delirium, via the phone. My primary area of focus in medical toxicology is on the use and effects of novel psychoactive substances including hallucinogens and I have multiple abstracts and publications in this area. In addition, I have cared for multiple patients who have used lysergic acid diethylamide (LSD) and similar substances both in at the bedside and via the poison control center.

Please, find below are my manuscript and chapter publications for the last ten years:

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19. Thornton SL, Clark RF. Encephalopathy from unintentional donepezil and memantine ingestion. *Pediatr Emerg Care*. 2014 Sep;30(9):649-50.
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I have never testified in court but have been deposed for the following matters on the dates indicated below:

10/31/2019	Parker, Pilbon, Halladay v. Freeman Health System and Kirberg Roofing, INC., # 18A0-CC00223
06/3/2019	Steverson vs Shuter et al. # P1300 CV201600465
12/3/2018	Pearson et al vs Pribil et al. #16HI-CC0024
03/27/2018	Stamler et al. vs Emergency Care Specialists Inc et al. # CV-16-873358
11/27/2017	Ferrai et al. vs. Robbins #16CA-CC00146
10/24/2016	State of Missouri vs. Robbins #701910183

8/26/2016 Waldmann vs. Arab Shrine Temple #2015-CV-359
1/14/2016 Independent Medical Examiner for Marta Nelson
12/16/2015 Independent Medical Examiner for Barbara Robinson

For this report I reviewed for the following material which was provided to me or found through Pubmed (<https://www.ncbi.nlm.nih.gov/pubmed/>) searches.

- 1) Amended Autopsy Report of David Cutler performed by David C. Winston, MD, PhD signed 8/9/2017
- 2) Arizona Department of Health Services Response to Subpoena to Produce Documents.
- 3) Unprofessional Conduct Report of Paramedic Grant Reed
- 4) Pima County and Barnes' First Supplemental Response to Mandatory Initial Discover.
- 5) Bates Pima County video clips.
- 6) Pima County's and Barnes' Response to Mandatory Initial Discovery.
- 7) Pima County Sheriff's Department Detailed Incident Report for 170605101
- 8) Emails Between Dr. Cutler and Pima County
- 9) Transcript of 911 Calls/Radio Traffic
- 10) PCSD Training PowerPoint on Sudden In Custody Death
- 11) Northwest Medical Center Hyperthermia Administrative Order
- 12) Northwest Medical Center Behavioral Administrative Order
- 13) Grant Reed (Rural Metro) Statement
- 14) Deputy Barnes Statement
- 15) Rural/Metro Pima Patient Care Report
- 16) Tucson Medical Center Records
- 17) LoVecchio DO, Expert Report

- 18) Evans, NREMT-P, Expert Report
- 19) Taylor, PhD, Expert Report
- 20) Deposition of Grant Reed dated 6/25/2019
- 21) Deposition of Bentley Bobrow, MD dated 5/3/2019
- 22) Deposition of Vince Figueroa dated 6/25/2019
- 23) Deposition of David Winston, MD dated 8/15/2019
- 24) Statement of Megan Cypcar

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- 7) Nichols DE, Grob CS. Is LSD toxic? *Forensic Sci Int.* 2018 Mar; 284:141-145.

- 8) Dolder PC, Schmid Y, Steuer AE, Kraemer T, Rentsch KM, Hammann F, Liechti ME. Pharmacokinetics and Pharmacodynamics of Lysergic Acid Diethylamide in Healthy Subjects. *Clin Pharmacokinet*. 2017 Oct;56(10):1219-1230.
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- 11) Mankowitz SL, Regenberg P, Kaldan J, Cole JB. Ketamine for Rapid Sedation of Agitated Patients in the Prehospital and Emergency Department Settings: A Systematic Review and Proportional Meta-Analysis. *J Emerg Med*. 2018 Nov;55(5):670-681.
- 12) Linder LM, Ross CA, Weant KA. Ketamine for the Acute Management of Excited Delirium and Agitation in the Prehospital Setting. *Pharmacotherapy*. 2018 Jan;38(1):139-151.
- 13) Burnett AM, Watters BJ, Barringer KW, Griffith KR, Frascone RJ. Laryngospasm and hypoxia after intramuscular administration of ketamine to a patient in excited delirium. *Prehosp Emerg Care*. 2012 Jul-Sep;16(3):412-4.
- 14) Weisfeldt ML, Becker LB. Resuscitation after cardiac arrest: a 3-phase time-sensitive model. *JAMA*. 2002 Dec 18;288(23):3035-8.

Based on the above information, my summary of the events of June 5th, 2017 is as follows: Per family, David Cutler's last known location was Tucson around 8:30 AM. It is believed he was driving his Jeep. It is also believed he had taken LSD early on June 5th, though the exact time and amount of use is not known. Megan Cypcar states that she did speak with David Culter around 1:38 AM and she perceived him as being impaired. At 5:30 AM it is known that he was taking photographs in downtown Tucson. He was documented to be at his brother's

apartment around 8:00 AM and there is where his cell phone was found. Around 9:40 AM a vehicle fire was reported in rural area of Pima County but the driver could not be located. The vehicle was later identified as belonging to David Cutler. It appeared to have been driven up a hill, struck a tree and then caught on fire. A local resident (Kristen Powell) reported hearing a man yelling for help at about 11:00 AM, but did not initially see anyone. A short while later she again heard a man yelling for help and observed a naked man yelling for help while walking up a hill Ms. Powell called 911 at about 11:28 AM. Pima County Sheriff Deputy Barnes makes contact with David Cutler around 11:45 AM at or near the top of the hill and proceeds to speak with him. David Cutler allows himself to be handcuffed. Over the next 20 minutes, more deputies arrive. They further restrain David Cutler by his arms and legs and he is placed in RPPS hobble restraints due to reports of combativeness. While restrained he is lying on the ground, fully exposed to the environment. There is no record of the deputies asking for or providing shading or cooling or hydration to David Cutler. Emergency medical services are called for at 11:48 AM. A Rural/Metro Pima ambulance arrives at 12:07 PM and makes contact with David Cutler at 12:13 PM. According to the records, Paramedic Grant Reed and EMT Vince Figueroa bring 500 mg of ketamine in a syringe with an 18 G needle. There is no documentation that any other equipment was brought to the scene by the paramedic or EMT. David Cutler's vital signs at 12:13 PM are reported to be a heart rate of 160 BPM and a respiratory rate of 34. There is no documentation of his initial blood pressure, temperature or oxygen saturation. His Glasgow Coma Score is reported to be a 10 with his eyes open spontaneously but he has incomprehensible speech and is only withdrawing from pain. No blood sugar is documented. Paramedic Reed administers no less than 300 mg of ketamine intramuscularly in the bilateral deltoids of David Cutler at 12:17 PM, stating that he "followed administrative order for excited delirium" which is the Northwest Medical Center (NWMC) Behavioral Administration Order. According to Paramedic Reed's report, David Cutler has a "positive response to ketamine administration." A Stokes basket and backboard are brought up

from the ambulance. David Cutler is then placed in a seated position but it is at this point that Paramedic Reed reports David Cutler to be showing signs of respiratory distress. For unclear reasons, at 12:27 PM, intramuscular naloxone is administered though there are no indications of opioid use or toxicity prior to his collapse. He then becomes apneic and pulseless though the exact time is not documented. Chest compressions are started. He is taken down to the waiting ambulance which appears to take ~ 5 minutes. While being taken to the ambulance water was reportedly poured on David Cutler. Once at the ambulance he is placed on a cardiac monitor and found to be in asystole. At 12:29 PM assisted ventilation is documented. At 12:34 PM a tympanic temperature of 102.9° F is documented. He is given more naloxone intramuscularly and then at 12:36 PM he is intubated after an intraosseous line is obtained. He is given multiple rounds of epinephrine (total of 4 mg), more naloxone (total of 6 mg) and amiodarone (300 mg). He is defibrillated at 12:40 for an episode of ventricular tachycardia but then develops pulseless electrical activity and asystole. His blood sugar is checked at 12:40 and reported to be 192 mg/dL. During David Cutler's pre-hospital care by the Rural/Metro PIMA paramedics there is no reference to them following the Northwest Medical Center Hyperthermia Order but there are reports of water being poured on David Cutler and ice packs being applied after he is in cardiopulmonary arrest.

David Cutler is transported to Tucson Medical Center "per NWMC cardiac arrest administrative order". There he receives calcium chloride 1 g, epinephrine 1 mg, magnesium sulfate 2 gram and sodium bicarbonate 50 mEq all via intravenous administration. He remains in asystole and an ultrasound notes no cardiac activity. A temporal temperature of 100.5° F is documented at 1:00 PM. After 15 minutes of resuscitation efforts at Tucson Medical Center, David Cutler is declared dead at 1:08 PM. The autopsy performed on June 7, 2017 by Dr. David Winston ascribed the cause of death as "hyperthermia due to exposure to the elements and lysergic acid diethylamide toxicity". Testing by Axis Forensic Toxicology on peripheral

blood obtained on June 7, 2019 (no time is given) is reported to be positive for naloxone (no level reported), ketamine (640 ng/mL), amiodarone (no level reported), caffeine (no level reported), and lysergic acid diethylamide (0.12 ng/mL).

From this information and based on my education, training and experience, the following are my opinions, to a reasonable degree of scientific certainty, on the condition and care of David Cutler on June 5, 2017.

- 1) David Cutler death on June 5, 2017 was not due to lysergic acid diethylamide (LSD) nor were his symptoms at the time of his death due to LSD. LSD is a potent hallucinogen. When taken it can cause profound hallucinations along with tachycardia and hypertension. Peak effects of LSD are typically seen within the first 6 hours of use and rapidly decline from there with symptoms rarely lasting more than 12 hours. This is consistent with LSD case I have managed personally. If, assuming David Cutler was under the influence of LSD at 1:38 AM, it would be very unlikely that he would still demonstrating significant signs of intoxication nearly 8 hours later. Deaths from LSD are rare, with some literature stating there is "not a single documented death due to LSD at recreational doses" (Nichols). In my 7 years as a medical toxicologist and poison control center medical director, I have not seen any deaths associated recreational use of LSD. By all accounts, David Cutler was using LSD recreationally. As with any drug, massive ingestions or overdoses of LSD can rarely be associated with deaths. However, there is no report that David Cutler's overdosed and his reported post-mortem peripheral blood LSD concentration of 0.12 ng/mL is almost ~100 times less than blood levels found in cases of LSD overdoses (Fysh). The serum half-life of LSD is approximately 2-3 hours (Dolder). Thus, at the time of the crash it could be estimated that David Cutler's LSD level would approximately 0.25 ng/ml. Even this level more than 10 times less than levels seen in patients given LSD who did not manifest significant toxicity and rather had

only mild symptoms (Upshall, Dolder). Furthermore, based on the Dodler et al. study which examined the levels and associated symptoms of 40 individuals given known amounts of LSD, an LSD level of 0.12 ng/mL or 0.25 ng/mL would be expected to cause little if any symptoms for David Cutler at the time of his death or crash, respectively. It would not be causing his elevated temperature, heart rate or agitation. This is notable because there is an erroneous belief that in this case, the LSD caused David Cutler's hyperthermia. While there have been rare reports of LSD causing elevated temperatures after overdoses, in reality, experts note "...that LSD does not usually produce hyperthermia" (Gillman). This is especially true in David Cutler's case as the levels of LSD in his system at the time of his death are minimal and 100 time less than those seen in overdose cases. This is demonstrated even further by the Dolder study which saw rises in temperatures of only 0.6 degrees Celsius or 1.8 degrees Fahrenheit with levels 10 to 30 time greater than David Cutler's. Rather David Cutler's delirium (altered mental status) was clearly caused by environmental induced hyperthermia with end organ dysfunction (i.e. heat stroke) with the possible contribution of a close head injury from his recent motor vehicle accident.

- 2) Due to his heat stroke, David Cutler had no capacity to care for himself and was at the mercy of the paramedics and law enforcement officers to make appropriate decisions and render effective treatment. The evaluation, decision making and treatment rendered by Paramedic Grant Reed to David Cutler on June 5, 2017 was below the standard of care and he demonstrated gross negligence and willful indifference to his professional responsibilities. This is demonstrated multiple times:
 - a. The Rural/Metro Pima protocols under which paramedic Grant Reed was operating under were not followed. The Northwest Medical Center Behavioral Administrative Order begins with initiation of supportive care, including obtaining

vital signs, temperature and blood sugar along with placing the patient on cardiac monitor and oxygen if need. A blood pressure, oxygen saturation, blood glucose and temperature were not obtained prior to administration of ketamine. David Cutler developed cardiopulmonary arrest yet prior to this was not evaluated to see if his oxygen situation was low thereby requiring supplemental oxygen or if his blood pressure was low thereby requiring interventions other than ketamine. Derangements in both of these vital signs can lead to the rapid cardiopulmonary collapse that David Cutler developed and simple treatments of either (supplemental oxygen or intravenous fluids) could have prevented his cardiac arrest. Paramedic Reed testified that he was familiar with his administrative orders yet appears to have willfully ignored them. This gross negligence in failing to follow established protocols directly led to David Cutler's death.

- b. The decision to use ketamine without the availability of appropriate equipment was grossly negligent. The use of ketamine to treat agitated patients in the pre-hospital setting has become common (Mankowitz, Linder). However, it is important to note the use of ketamine comes with multiple complications that require close monitoring and ready access to potentially life-saving equipment such as airway support. In some studies, over 1 in 4 patient given ketamine in the pre-hospital setting require intubation (Mankowitz). Increased airway secretions which can compromise breathing is also known adverse effect of ketamine (Linder). David Cutler is noted by one of the deputies to be drooling after the ketamine administration yet ready treatment (airway suctioning) was not available. Another well-known ketamine complication that could lead to rapid demise is laryngospasm (Burnett, Mankowitz). Treatment would require positive pressure bag-valve mask ventilation or intubation. It is for these exact reasons that the Northwest Medical Center Behavioral Administrative Order, which

Paramedic Reed was supposed to be following, clearly states "O2 to maintain sat > 90%" and "cardiac monitor" at the beginning of the order set. Paramedic Reed's decision to use ketamine and willfully ignore the need for immediate access to life saving equipment was below the standard of care, grossly negligent and directly contributed to David Cutler's death.

- c. Paramedic Reed either failed to properly evaluate Mr. Cutler for heat stroke or willfully ignored the obvious signs of heat stroke that David Cutler was demonstrating. Heat stroke is the result of severe hyperthermia, usually from exertions in a hot environment. Heat stroke is a life-threatening emergency condition. It can rapidly result in dysfunction and damage to multiple organs including the brain which manifest as altered mental status or delirium. It is not in dispute that David Cutler was demonstrating delirium but Paramedic Reed did not appear to appreciate that heat stroke is a potential cause of such delirium and made no attempt to treat it. David Cutler's had obvious signs of heat stroke yet his temperature was not checked until well after the ketamine administration and there was no indication that Paramedic Reed even considered using the Northwest Medical Center Hyperthermia Administrative Orders before David Cutler went into cardiac arrest. In my opinion, rapid recognition David Cutler's heat stroke and prompt institution of cooling measures would have saved David Cutler's life. Paramedic Reed did not do so and this was not only below the standard of care but grossly negligent considering the obvious signs of life-threatening heat stroke David Cutler was manifesting.
- d. The administration of multiple rounds of naloxone to David Cutler was below the standard of care as naloxone is an antidote or reversal agent for the effects of opioids such as heroin or fentanyl. Opioids produce sedation and respiratory depression. Prior to his cardiopulmonary arrest there was no indication that

David Cutler was under the influence of opioids nor was there any report that he had taken any. Naloxone is not a reversal agent for ketamine nor is it treatment for heat stroke. The administration of naloxone multiple times was below the standard of care as it was not indicated and it resulted in harm for David Cutler as more beneficial therapies such as defibrillation or assisted ventilation could have been performed during the time it took to administer naloxone.

- e. Paramedic Reed failed to bring potentially lifesaving equipment such as an oxygen tank, a bag valve mask, a portable defibrillator or advanced cardiac life support medications such as epinephrine when he came up to treat David Cutler. Incredulously, Paramedic Reed sent EMT Figueroa back down to the ambulance for an 18 G needle but never requested any potentially life-saving equipment. When David Cutler went into cardiopulmonary arrest, there was approximately 5 minutes or more where only CPR was being provided to him. The first several minutes of a cardiac arrest are when rapid defibrillation can be most effective and lifesaving (Weisfeldt). Yet, it was not provided to David Cutler as Paramedic Reed made the decision to not bring such equipment with him. David Cutler's cardiac arrest could have been due to pulmonary failure and early, simple treatment with oxygen and ventilation with a bag valve mask might have saved his life. He was not provided these basic, portable treatments until he was carried down to the ambulance, at least 5 minutes into his arrest. Quality CPR is critical in treating cardiopulmonary arrest. But because Paramedic Reed did not bring with him any life-saving equipment, David Cutler had to be given CPR during a transport in a Stoke's basket down a hill. Providing true, quality CPR in this setting is almost impossible. Had Paramedic Reed brought the appropriate, and common life-saving equipment then David Cutler could have had quality CPR performed in place, increasing his chances of survival. Paramedic Reed's

decision not to bring any potentially life-saving equipment with him was grossly negligent, indifferent and directly led to David Cutler's death.

- 3) The treatment of David Cutler by Deputy Barnes and the other Pima County Sheriff's Department's officers was grossly negligent and indifferent and directly led to his death. In particular, the actions or lack of actions by Deputy Barnes's, who had the longest contact with David Cutler and was in the position of on-scene authority were particularly negligent. From the videos of taken of David Cutler, it was and should be obvious to even non-medical personnel he was suffering from severe, life-threatening environmental stress, i.e. heat stroke. He was demonstrating almost every sign and symptom that the Pima County Sheriff's Department's own training on heat stroke listed, including rapid breathing, no perspiration, and altered mental status. Due to his severe condition, David Cutler had no capacity to care for himself and was at the mercy of the paramedics and law enforcement officers to render appropriate treatment. Yet, in over 30 minutes, neither Deputy Barnes nor any of the other deputies attempted to hydrate, cool or even shade David Cutler while he lay exposed to the full sun and on ground that may have been up to 140° F. This gross negligence is crystalized by the sobering fact that David Cutler went from talking and cooperating with commands to cardiac arrest in the approximately 30-40 minutes deputy Barnes was involved in his care. Furthermore, instead of attempting to treat David Cutler for his life-threatening condition, deputy Barnes and the other Pima County Sheriff's Department's officers exacerbate the situation by restraining David Cutler naked on the hot desert ground and by further restraining him with RIPP restraints. This led to him to becoming even more agitated and worsened his condition. These actions by Deputy Barnes and the other officers were grossly negligent, willfully indifferent and directly led to David Cutler's death.

I reserve the right to amend this report should new or additional information be made available. For my time and services, I charge \$450 per hour to review and discuss pertinent medical records, perform medical literature search and produce any written opinions with a 4 hour minimum retainer, \$600 per hour to give deposition with 3 hours minimum plus time and travel and \$6000 for courtroom testimony plus time and travel which is billed at \$75/hour .

Sincerely,



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ABSTRACTS

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63. Thornton S, Darracq M. Patch Problems? Characteristics and Outcomes of Transdermal Buprenorphine Delivery System Exposures Reported to the NPDS. J. Med. Toxicol. 2018. Abstract 32.
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65. Thornton S, Darracq M. Modified high? Adult modified release stimulant exposures reported to the NPDS. Clin Toxicol (Phila). 2018 Oct;56(10): 120 Abstract 200.
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34. Thornton S, Lisbon D, Lin T, Gerona R. Beyond Ketamine and Phencyclidine: Analytically Confirmed Use of Multiple Novel Arylcyclohexylamines. *J Psychoactive Drugs*. 2017 Sep-Oct;49(4):289-293.
35. Garg, U., Johnson, L., Wiebold, A., Ferguson, A., Frazee, C., Thornton, S. False-Positive Carbamazepine Results by Gas Chromatography–Mass Spectrometry and VITROS 5600 Following a Massive Oxcarbazepine Ingestion. *The Journal of Applied Laboratory Medicine* Jan 2018.
36. Darracq MA, Armenian P, Comes J, Thornton S. Medical toxicology education in US emergency medicine residencies. *Am J Emerg Med*. 2018 Mar 3. pii: S0735-6757(18)30184-0. doi: 10.1016/j.ajem.2018.03.007.
37. Thornton SL, Oller L, Coons DK. 2016 Annual Report of the University of Kansas Health System Poison Control Center. *Kans J Med*. 2018 May; 11(2):23-33.
38. Marshall K, Thornton SL. Worse than the Disease? The Rash of Lomatium Dissectum. *Kan J Med*. 2018 May; 11(2): 54-55.
39. Tung RC, Thornton SL. Characteristics of Laboratory Confirmed Ethylene Glycol and Methanol Exposures Reported to a Regional Poison Control Center. *Kans J Med*.

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40. Bowman CF, Pruitt B, Marx J, Thornton SL. Massive Iatrogenic Pediatric Ketamine Overdose With Serial Levels and Minimal Morbidity. *Pediatr Emerg Care*. 2019 Feb 25.

CHAPTER CONTRIBUTIONS

1. Thornton SL. Cyproheptadine. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
2. Thornton SL. Physostigmine and Neostigmine. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
3. Thornton SL. Marine Envenomation. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
4. Thornton SL. Bromides. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
5. Thornton SL. Bromates. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
6. Thornton SL. Hydrogen Sulfide. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
7. Thornton SL. Isopropanol. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
8. Thornton SL. Antidiarrheal. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
9. Thornton SL. Antiemetics. *Toxicology Recall*, 1st Ed; Lippincott Williams & Wilkins, 2009.
10. Thornton SL. *eMedicine*: Pediatrics, Urinary Tract Infections and Pyelonephritis. 2008-2012.
11. Thornton SL. Flail Chest. *Rosen and Barkin's 5-Minute Emergency Medicine Consult*; 4th Ed. Lippincott Williams & Wilkins, 2010.
12. Thornton SL, Ly B. Over-the-Counter Medications. *James G. Adams Emergency Medicine*. 2nd Ed. Saunders, 2012.
13. Thornton SL, Clark RF. Marine Envenomations. *James G. Adams Emergency Medicine*. 2nd Ed. Saunders, 2012.

14. Thornton SL. *eMedicine: Antibiotic Guide*: Urinary Tract Infections, 2011.
15. Thornton SL, Tomaszewski C. Herbals and Vitamins. *Tintinalli's Emergency Medicine Manual*, 7th Ed. McGraw-Hill Professional, 2012.
16. Thornton SL. Fracking. *Encyclopedia of Toxicology*, 3rd Edition. Academic Press, 2014.
17. Thornton SL. Snakes. *Encyclopedia of Toxicology*, 3rd Edition. Academic Press, 2014.
18. Thornton SL. Flail Chest. *Rosen and Barkin's 5-Minute Emergency Medicine Consult*; 5th Ed. Lippincott Williams & Wilkins. 2014.
19. Gallagher R, Thornton S. The Consequence of Grandpa's Loaded Medicine Cabinet. *Avoiding Common Errors in the Emergency Department*. 2nd Edition. Lippincott Williams & Wilkins. 2017.
20. Thornton SL, Darracq MS, Ly BT. Amphetamines, Cathinones (Bath Salts), and Cocaine. *Guidelines for Investigating Officer-Involved Shootings, Arrest-Related Deaths, and Deaths in Custody*. Routledge. 2018.
21. Darracq MS, Thornton SL, Ly BT. Central Nervous System Depressants. *Guidelines for Investigating Officer-Involved Shootings, Arrest-Related Deaths, and Deaths in Custody*. Routledge. 2018.

CURRENT RESEARCH

2018 Novel Psychoactive Substance Detection Consortium

OTHER ACADEMIC ACTIVITIES

2014-Present Reviewer- Clinical Toxicology
2016-Present Reviewer- Pediatric Emergency Care

LECTURES/PRESENTATIONS

INVITED LECTURES

<u>YEAR</u>	<u>TITLE</u>
2004	“Unstable Cervical Spine Fractures” Presented at University of Kansas Med Center to Emergency Department Staff

2005 “Ultrasound in the Emergency Department”
 Presented at University of Kansas Med Center to
 Emergency Department Staff.

2006 “What Is Emergency Medicine”
 Presented at University of Kansas Med Center
 to second and third year medical students.

2006 “Tox 101”
 Presented at University of Kansas Med Center
 to second and third year medical students

2006 “Toxicology of Prescription Drug Abuse”
 Presented to UCSF-Fresno Emergency Medicine
 Residents

2007 “Treatment of Migraines in the Emergency Department”
 Presented to UCSF-Fresno Emergency Medicine
 Residents

2007 “Hypoglycemia and Metabolic Acidosis in a
 Pediatric Patient.”
 Presented to UCSF-Fresno Emergency Medicine
 Resident.

2008-2010 “Medical Student Lecture Series on Basics in
 Emergency Medicine.”
 Given to fourth year medical students rotating in
 KUMC Emergency Department.

2010 “Toxic Salsa: Drugs of Abuse, Poisonous
 Plants, Stings & Bites”
 Presented to UCSD/Palomar Paramedic College
 Lecture Series

2010 “When Getting High, Gets You Down...”
 Presented at UCSD ED Nurses, Paramedics &
 EMTs CE course

2010 “Toxidromes”
 “Acetaminophen Toxicity”
 “Toxic Alcohols”
 “Crotalid Envenomations”
 “Urine Drug Screens”
 Guest Lecture Series in Toxicology
 Presented to University of Kansas Emergency
 Medicine Residents – December 2010

2010 “Salicylate Toxicity”
Presented to Truman Medical Center Emergency
Medicine Residents – December 2010.

2011 “Headache and Vertigo”
“Abdominal and Pelvic Pain”
Lectures to rotating fourth year medical students at
UCSD Emergency Medicine Residency.

2011 “Toxic Alcohols”
Presented to UCSD Skaggs School of Pharmacy
Students.

2011 “Introduction to Toxicology”
“Calcium Channel Blocker Toxicity”
“Tricyclic Antidepressant Toxicity”
“Deconstructing Decontamination”
“Synthetic Highs”
“Poisonous Plants”
Guest Lecture Series in Toxicology
Presented to University of Kansas Emergency
Medicine Residents – July 27, 2011.

2011 “Pediatric Toxicology Questions and Answers”
“Synthetic Highs”
Presented to KUMC Pediatric Residents –
December 2011.

2011 “Urine Drug Screens”
Presented to Truman Medical Center Emergency
Medicine Residents – July 2011.

2011 “Pediatric Toxicology: Questions and Answers”
Presented to UCSD-Rady’s Childrens Hospital
Pediatric Residents – August 2011

2011 “Beta Blocker Toxicity”
“Toxic Blood”
“Sugar Free – Toxicity of Oral Hypoglycemics”
“Natural Highs”
Guest Lecture Series in Toxicology
Presented to University of Kansas Emergency
Medicine Residents – December 2011.

2011 “Marine Envenomations”
Presented to Truman Medical Center Emergency

Medicine Residents – December 2011

2012 “Toxic Alcohols”
 Presented to Scripps Mercy Hospital Internal
 Medicine Residency – January 2012

2012 “Toxic Alcohols”
 Presented to UCSD-Rady’s Childrens Hospital
 Pediatric Residents – January 2012

2012 “Antimuscarinic Toxicity and Physostigmine”
 Presented to UCSD-Rady’s Childrens Hospital
 Pediatric Residents – March 2012

2012 “Low Dose Poisons”
 Presented to U of Kansas Pediatric Residency
 08/2012

2012 “Common Poisonings”
 Presented to U of Kansas Family Medicine
 Residency 10/2012

2012 “Dyshemoglobins”
 Presented to U of Kansas Emergency Medicine
 Residents 10/17/2012

2012 “Antidepressants – Toxicity of Non-TCAs”
 Presented to U of Kansas Emergency Medicine
 Residents 10/17/2012

2012 “Management of Alcohol Withdrawal”
 Presented to U of Kansas Emergency Medicine
 Residents 10/24/2012

2012 “Biological Weapons”
 Presented at Emergency Medicine Grand Rounds
 11/07/012

2012 “Chemicals Complicating Trauma”
 Presented at U of Kansas Hospital Trauma Grand
 Rounds 12/12/2012

2012 “Toxic Blood: Toxicology of Anticoagulants”
 Presented to U of Kansas Emergency Medicine
 Residency 12/12/2012

2012 “Chemical Weapons”
 Presented to U of Kansas Emergency Medicine

Residency 12/19/2012

2012 “Synthetic Highs”
 Presented at The Regional Prevention Center:
 Synthetic Drugs – The New Counterculture Event
 12/03/2012

2013 “Radiation”
 Presented to U of Kansas Emergency Medicine
 Residency 02/06/2013

2013 “Occupational Exposures with Emergency Room Results”
 Presented at 35th Annual Carroll P. Hungate
 Postgraduate Seminar on Occupational and
 Environmental Health – 02/22/2013

2013 “The Devil You Don’t Know: Toxicology of
 Designer Drugs”
 Presented at Quintiles Grand
 Rounds-03/20/2013

2013 “Toxic Trauma: Chemicals Complicating
 Trauma”
 Presented at Midwest Trauma Society Conference
 05/02/2013

2013 “Cocaine and Amphetamines: The Toxicology of ‘Uppers’”
 Presented to U of Kansas Emergency Medicine
 Residents 04/17/2013

2013 “The Art of the Bite: Management of Snake Bites”
 Presented at U of Kansas Hospital Trauma Grand
 Rounds 05/08/2013

2013 “The Devil You Don’t Know: Toxicology
 of Designer Drugs”
 Presented to U of Kansas Family Medicine
 Residents. 05/22/2013

2013 “Pharming: Misuse/Abuse of OTC Drugs”.
 Presented to U of Kansas Pediatric
 Residents
 05/30/2013

2013 “All Hot and Bothered” – Serotonin
 Toxicity, NMS, and Malignant Hyperthermia.
 Presented to Pulmonary- Critical
 Care Department

06/11/2013

2013 "Pediatric Toxicology: Questions and Answers"
 Presented to U of Kansas Pediatric Residents
 08/27/2013

2013 "Toxicity of LiFe" – Iron and Lithium Toxicity
 Presented to U of Kansas Emergency Medicine Residents 09/14/2013

2013 "Anticonvulsant Toxicity"
 Presented to U of Kansas Emergency Medicine Residents 09/21/2013

2013 "Designer Drugs: The Devil You Don't Know"
 Presented to Department of Pathology and Laboratory Medicine at Children's Mercy Hospital Lab CE on 11/14/2013.

2013 "Killing Time: Pesticides in the ED"
 Presented to U of Kansas Emergency Medicine Residents 11/20/2013

2013 "Good Golly, Miss Molly: The Challenge of Designer Drugs."
 Presented to Life Star CE meeting 12/3/2013.

2014 "New Drugs on the Streets"
 Presented to Miami County EMS
 01/28/2014

2014 "The Old and New Mickey Finn – Drug Facilitated Sexual Assault"
 Presented to University of Kansas Hospital SANE program 2/12/2014

2014 "Poison Control Centers and Public Health Departments: The Past and Future"
 Presented at Kansas Public Health Grand Rounds
 02/19/2014

2014 "What the Frack – Toxicology of Hydraulic Fracturing."
 Presented at 36th Annual Carroll P. Hungate Postgraduate Seminar on Occupational and Environmental Health – 02/21/2014

2014 "The Devil You Don't Know. The Rise of Novel Psychoactive Substances."
 Presented to U of Kansas Psychiatry Residents.
 2/25/2014

2014 "Useful or Useless? The Limitations of the Urine Drug Screen."
 Presented to U of Kansas Psychiatry Residents
 3/4/2014

2014 "Legal Highs and Designer Drugs: The Devil You Don't Know"
 Presented at Paul Laybourne Symposium on Child Psychiatry
 4/25/2014

2014 "GCS 14F: Sympathomimetic Toxicity"
 Presented to U of Kansas Hospital Emergency Medicine Residents 04/30/2014

2014 "Brown Recluse Bites"
 Presented at U of Kansas Pediatrics Grand Rounds
 5/7/2014

2014 "The UDS and the Injured Patient: Limitations and Utility"
 Presented at U of Kansas Hospital Trauma Grand Rounds. 5/14/2014

2014 "Pediatric Toxicology – Some Questions and (Hopefully) Some Answers."
 Presented to U of Kansas Department of Pediatrics Residents. 7/31/2014

2014 "What's that Smell? Toxic Gases in the Prehospital Setting"
 Presented at KEMSA Annual Conference
 08/17/2014

2014 Metabolic Antidotes
 Presented to U of Kansas Hospital Emergency Department Nursing Staff
 08/26/2014

2014 "Too Low and Too Slow" Calcium Channel Antagonists
 Presented to U of Kansas Hospital Emergency Medicine Residents.
 08/27/2014

2014 "Legal Highs and Designer Drugs: The Devil You Don't Know"
 Presented to Community Memorial Hospital
 Medical Staff, Marysville, KS
 09-19-2014

2014 "Legal Highs and Designer Drugs: The Devil You Don't Know"
 Presented at What's New in Pediatric Emergency
 and Urgent Care Medicine 11-01-2014

2014 "Legal Highs and Designer Drugs: The Devil You Don't Know"
 Presented to Olathe Fire Dept Annual CME Course
 11-07-2014

2014 "The Art of the Bite: Snake and Spider Bites"
 Presented to Olathe Fire Dept Annual CME Course
 11-07-2014

2014 "The Devil You Don't Know. Novel Psychoactive Substances."
 Presented to U of Kansas Dept of Psychiatry Grand Rounds
 12/06/2014

2015 "Toxicology in the Prehospital Setting"
 Presented to Miami County EMS
 01/06/2015

2015 "Snake and Spider Bites"
 Presented to Miami County EMS
 01/06/2015

2015 "Legal Highs"
 Presented to Miami County EMS
 01/06/2015

2015 "Opioids and Opioid Withdrawal"
 Presented to U of Kansas Hospital Emergency
 Medicine Residents
 01/21/2015

2015 "Tricyclic and Antidepressant Toxicology"
 Presented to U of Kansas Hospital Emergency
 Medicine Residents
 01/21/2015

2015 “A-Z: Toxicology for the EM Boards”
 Presented to U of Kansas Hosp Emergency
 Medicine Residency
 02/04/2015

2015 “The Devil You Don’t Know”
 Presented to U of Kansas FP Residency
 2/25/2015

2015 “Carbon Monoxide and HBO”
 Presented to U of Kansas Pediatrics Grand Rounds
 02/27/2015

2015 “Toxicology 101”
 Presented to U of Kansas Family Medicine
 Residents
 04/01/2015

2015 “Salts and Spice and Everything (Not) Nice.
 Toxicology of Designer Drugs”
 Presented to University of Kansas Hospital Critical
 Care Division Nursing Update CME
 04/28/2015, 05/12/2015

2015 “GCS 14F: Toxicity of Sympathomimetics”
 Presented to U of Kansas Hosp Emergency
 Medicine Residency.
 04/29/2015

2015 “Art of the Bite: Managing Venomous Snake Bites”
 Presented at Midwest Trauma Society Annual
 Conference
 05/13/2015

2015 “All Hot and Bothered: Hot Toxidromes”
 Presented to U of Kansas Hosp Emergency
 Medicine Residency
 5/20/2015

2015 “Toxic Blood”
 Presented to U of Kansas Hosp Emergency
 Medicine Residency
 5/27/2015

2015 “Art of the Bite: Management of Venomous Snake Bites”
 Presented at KEMSA Annual Conference

08/16/2015

2015 "Art of the Bite: Management of Venomous Snake Bites"
 Presented at Life Star of Kansas Emergency Care
 Symposium.
 10/01/2015

2015 Moderator "AAPCC Symposium"
 NACCT 2015, 10/11/2015

2015 "The Devil You Don't Know: Emerging Drugs of Abuse"
 Presented at KUMC EMS Symposium
 10/24/2015

2015 "Art of the Bite: Management of Venomous Snake Bites"
 Presented at KUMC ED Trauma Education Day
 12/9/2015

2016 "Management of the Poisoned Patient in the
 Prehospital Setting"
 Presented to Miami County EMS
 2/9/2016

2016 "The Art of the Bite: Managing Snake Bites
 in the Prehospital Setting"
 Presented to Miami County EMS
 2/9/2016

2016 "The New Mickey Finn: DFSA Old and
 New"
 Presented to Sexual Assault Nurse Examiner Course
 KUMC
 2/9/2016

2016 "A-Z: Tox for the Boards"
 Presented to U of Kansas Hosp Emergency
 Medicine Residency
 2/17/2016

2016 "Medical Clearance of the Pediatric
 Intentional Overdose in the ED"
 Presented to The University of Kansas Hospital -
 Marillac Campus Staff
 2/26/2016

2016 "Hot Toxidromes"
 Presented to KUMC Psychiatry
 Residents

Thornton000043

3/8/2016

2016 “They Drank What? Toxicology of Caustics”
 Presented to U of Kansas Hosp Emergency Medicine Residency
 3/23/2016

2016 “Tox 101”
 Presented at KUMC Critical Care Boot Camp
 4/7/2016

2016 “The New Mickey Finn: DFSA Old and New”
 Presented to Sexual Assault Nurse Examiner Course Research-Brookside
 4/7/2016

2016 “How High is too High? High Dose Insulin”
 Presented to Life Star CME
 4/12/2016

2016 “Hair of the Dog: Drug Withdrawal in the ICU.”
 Presented to KUMC Critical Care Update
 5/12/2016

2016 “A Test’s Got To Know Its Limitations: Utility and Limitation of the Urine Drug Screen.”
 Presented to Children’s Mercy Hospital SCAN Team
 5/26/2016

2016 “Lipid Love: Use of Intravenous Lipid Emulsion in the Poisoned Patient”
 Presented to KUMC Critical Care Division
 5/31/2016

2016 “Art of the Bite: Managing Venomous Snake Bites”
 Presented to U of Kansas Hospital Emergency Medicine Residency
 6/15/2016

2016 “The New Mickey Finn: DFSA Old and New”

Thornton000044

New”
Presented to Sexual Assault Nurse Examiner Course
St Lukes Kansas City
8/11/2016

2016 “Narcan Strikes Back”
 Presented at KEMSA Annual
Conference
Wichita, KS
08/13/2016

2016 “Too Low and Too Slow: The Poisoned
Heart”
Presented to U of Kansas Hospital Emergency
Medicine Residency
9/21/2016

2016 “What is that Rash From? Occupational
Skin Disorders”
Presented at 42nd Annual State of Kansas Workers
Compensation Seminar.
9/27/2016

2016 ”Acute Methamphetamine Intoxication and
It’s Treatment”
Presented at Sedan Urgent Care
Conference
10/7/2016

2016 “They Took What?! The Challenge and
Toxicity of New and Emerging Drugs of Abuse”
Presented at KUMC Trends in Trauma Education
Day
11/21/2016

2016 “Tweaking in the 21st Century! Meth, Bath
Salts, and Beyond.”
Presented at Mosaic Life Care Grand Rounds, St.
Joseph MO.
12/6/2016

2017 “What’s the Vape About?”
Presented at Kansas City Southwest Clinical
Society Winter Conference, Overland Park, KS
2/10/2017

2017 “When the Bite is Worse Than The Bark:
Bites From Snakes, Dogs, and Rabid Animals...”

Presented to KU Area Health Education Centers
Brown Bag Webinar Series
3/7/2017

2017 “Bites and Stings”
 Presented to Murphy Academic
Society
 4/13/2017

2017 “Chemical Weapons”
Presented to U of Kansas Hospital Emergency
Medicine Residency
 4/26/2017

2017 “Novel Highs. What Kids Are Using in
2017?”
Presented at Paul Laybourne
Symposium on Child Psychiatry
 5/5/2017

2017 “The Devil You Didn't Know: The Rise of
Novel Psychoactive Substances.”
Presented at KUMC Grand Rounds
 5/18/2017

2017 “They Drank What? Caustic Ingestions”
Presented to U of Kansas Hospital Emergency
Medicine Residency
 5/31/2017

2017 Introduction to Toxicology
Presented to University of Kansas School of
Medicine Students on Pediatric Clerkship.
Recurring

2017 “Living in the Fast Lane”
Presented to 2017 Cardiac Nursing Symposium
University of Kansas Hospital
 9-7-2017

2017 “Novel Highs”
Presented to Univeristy of Kansas Hospital
Pharamacists
 9-28-2017

2017 “Drug Screens: Utility and Limitations”
Presented at Greater Kansas City Chapter for
American Society for Pain Management Nursing,

Fall 2017 Conference.
10-21-2017

2017 "The Toxic Heart: Tricyclic Antidepressants and Other Sodium Channel Blockers"
 Presented to KUMC Pulmonary/Critical Care Division.
 11-7-2017

2018 "Sodium Channel Blockers"
 Presented to U of Kansas Hospital Emergency Medicine Residency
 01/24/2018

2018 "Hot Toxidromes"
 Presented to KUMC Psychiatry Residents
 3/27/2018

2018 "The Devil We Don't Know: Toxicity of Novel Psychoactive Substances"
 Presented to VISIONS Symposium Olathe, KS
 03/2/2018

2018 "Viper 2018: Old and New in Venomous Snake Bite Management"
 Presented to Midwest Trauma Society
 Independence, MO
 5/04/2018

2018 "The Elephant (Tranquilizer) In The Room: Threat of Fentanyl and its Analogs"
 Presented to Kansas Council of Health-System Pharmacists/Missouri Society of Health-System Pharmacists Spring Meeting 2018\ Olathe, KS
 5/04/2018

2018 "Viper 2018: Old and New in Venomous Snake Bite Management"
 Presented at 2018 Missouri EMS Conference and Expo
 Branson, MO
 7/27/2018

2018 "The Elephant (Tranquilizer) In The Room:

“Threat of Fentanyl and its Analogs”
Presented at KEMSA Annual Conference
Wichita, KS
08/11/2018

2018 “New Trends in Substance Abuse”
Presented at KC SouthWest Clinical Society Fall Conference- Mental Health Section
Overland Park, KS
10/05/2018

2019 “Fear of Flumazenil”
Presented at Emergencies In Medicine CME Conference
Park City, UT
2/26/2019

2019 “B9-052 27 year old female with Agitation.”
Presented to ACED 805, University of Kansas SOM
210 Medical Students
Kansas City, KS
3/19/2019

2019 “Drug Facilitated Sexual Assault”
Presented at SANE Training Course
Kansas City, KS
3/20/2019

COMMITTEE PARTICIPATION

2008-2010 Cerebrovascular PI Committee
2012-Present P&T Committee
 Chair 2015 - Present
 Vice-Chair 2014-2015
2012-2015 Emergency Medicine Residency Education Committee
2013-Present Associate Research Director, Department of Emergency Medicine
2013-2015 Emergency Medicine/Pediatric Liaison
2013-2016 Pediatric Trauma Committee
2013-2017 Pediatric Critical Care Committee
2016-Present ACMT Membership Committee
2017-Present Physician Committee Member, Johnson County EMS

PROFESSIONAL ACTIVITIES

2001-2010 United States Air Force Reserve, Major – Honorable Discharge.

2003-2004	Instructor Park-Medic Training Program University Medical Center 445 S. Cedar, Fresno CA 93702 559-459-5105
08/2004-02/2005	Staff Physician (Per Diem) Oakhurst Community Medical Center 48677 Victoria Lane, Oakhurst, CA 93644 559-683-2244
08/2004-1/2005	Game Day Physician Fresno Falcons (Minor League Hockey Team)
03/2005-07/2005	Emergency Physician (Per Diem) Tulare District Hospital 869 Cherry St, Tulare, CA 93274 559-688-0821
08/2005-01/07	Staff Physician Emergency Department St. Luke's Hospital 4401 Wornall Rd, Kansas City, MO 64111 816-932-8211
08/2005-03/2006	Staff Physician Emergency Department St. Luke's North Hospital 5830 NW Barry Rd, Kansas City, MO 64151 816-891-6010
03/2006-07/2008	Staff Physician Emergency Department St. John's Hospital 3500 S. 4 th St, Leavenworth, KS 66408 913-680-6000
07/2006-7/2012S	Attending, (Volunteer Clinical Instructor) Truman Medical Center 2301 Holmes St Kansas City, MO 64108 816-404-1000
07/2006-06/2010	Attending, (Assistant Professor) University of Kansas Hospital 3901 Rainbow Blvd Kansas City, KS 66160 913-588-6500
10/2006-05/2008	Attending, (UCSF School of Medicine Clinical Instructor)

UCSF-Fresno Emergency Medicine Residency Program
155 North Fresno Street
Fresno, CA 93701
559-499-6440

03/2008-07/2008 Staff Physician Emergency Department
Providence Medical Center
8929 Parallel Parkway, Kansas City, KS 66112
913-596-4000

07/2010 – 07/2012 Attending, (UCSD School of Medicine Clinical Instructor)
UCSD Emergency Medicine Residency Program
200 W Arbor Dr, #8895
San Diego, CA 92103
619-543-6222

08/2012 – Present Attending (Associate Clinical Professor)
University of Kansas Hospital
Emergency Medicine
Medical Toxicology
3901 Rainbow Blvd
Kansas City, KS 66160
913-588-6500

08/2012- Present Medical Director
University of Kansas Health System Poison Control Center
3901 Rainbow Blvd., 4045 Delp
Kansas City, KS 66160
913-588-0152

10/2012-Present Staff Medical Toxicologist
Children's Mercy Hospital
2401 Gillham Rd Kansas City, MO 64108
(816) 234-3000

08/2016-Present Backup Competent Medical Authority
MRIGlobal
Kansas City, MO
(816) 753-7600

10/2018 – Present Staff Physician Emergency Department
Kansas City VA
4801 Linwood Blvd, Kansas City, MO 64128
(816) 861-4700

PROFESSIONAL MEMBERSHIPS

American College of Emergency Physicians - Fellow
American College of Medical Toxicology
American Academy of Clinical Toxicology

AREAS OF PROFESSIONAL INTEREST

Toxicology
Ultrasound
Hyperbaric Medicine

Stephen Thornton, M.D.

**Board Certified Medical Toxicology
Board Certified Emergency Medicine**

Fee Schedule

- I. \$450/hour to review and discuss pertinent medical records, perform medical literature search and produce any written opinions with a 4 hour minimum retainer.
- II. \$600/hour to give deposition with 3 hours minimum plus time and travel.
 - Require 1 month notice to schedule time for deposition or testifying.
 - Cancellation fee of \$1000 if cancellation within 7 days of scheduled time.
- III. \$6000 for courtroom testimony plus time and travel.
 - Require 1 month notice to schedule time for deposition or testifying.
 - Cancellation fee of \$1000 if cancellation within 7 days of scheduled time.
- IV. \$75/hour all for time and travel

➤ Please note all hours are rounded up to nearest whole hour.

Exhibit B

In The Matter Of:

Cutler
v.
Pima County

Transcript of:

STEPHEN LOUIS THORNTON, M.D.

February 21, 2020

Colville & Dippel
LLC

1309 E Broadway Blvd
Tucson, AZ 85719

O 520.884.9041
F 520.623.1681
ArizonaDepos.com

1 he was retained, yes.

2 Q. All right. And then are you also
3 giving standard of care opinions in this case as to
4 Grant Reed, the paramedic Grant Reed, and the EMT
5 Vince?

6 A. So as a board certified emergency
7 medicine physician, part of my training is in EMS
8 services. That's why EMS is now a subspecialty of
9 emergency medicine.

10 So as an emergency medicine resident, I
11 did a rotation through EMS. I rode with EMS.
12 There are EMS questions on our board certification
13 test. So in that sense, I believe that I can speak
14 to the standard of care of an emergency medical
15 service in regards to the practice of emergency
16 medicine.

17 Q. Okay. But let me make sure I
18 understand your background. As I understand it,
19 you went to, what, the University of Kansas,
20 correct, for your undergraduate work?

21 A. Kansas State University for my
22 undergraduate work.

23 Q. Sorry. Kansas State.

24 A. There's a big difference.

25 Q. All right. And then you went to --

1 then you went directly into medical school; is that
2 correct?

3 A. I did. University of Kansas School of
4 Medicine.

5 Q. Okay. And then after that, you did, I
6 believe, a fellowship in the San Francisco area; is
7 that correct?

8 A. I did a four-year emergency medicine
9 residency at the University of California
10 San Francisco - Fresno.

11 Q. And then at one point you did a
12 fellowship over in the San Diego area, correct?

13 A. I did a two-year medical toxicology
14 fellowship in San Diego, yes.

15 Q. Were you ever an emergency medical
16 technician, an EMT?

17 A. No.

18 Q. Do you have any certifications as an
19 EMT?

20 A. No.

21 Q. All right. Were you ever -- did you
22 ever work as a paramedic?

23 A. I rode on the ambulance as a resident,
24 so technically we could do the same things
25 paramedics do, but I've never been trained as a

1 paramedic, if that's your question.

2 Q. And you're not certified as a
3 paramedic, correct?

4 A. I've never sat for any certification
5 for being a paramedic.

6 Q. When you said you rode in the ambulance
7 as a resident, when would that have been?

8 A. That would have been -- would have been
9 between 2001 and 2005. We have a month of
10 emergency medicine -- or EMS because I did the EMS
11 month. And as part of that, there's several
12 ride-alongs that you go on with the ambulances.

13 Q. Other than those rides, have you ever
14 been out on a ride with EMS or a paramedic in an
15 ambulance setting?

16 A. As a medical student, I worked at the
17 Philmont Boy Scout Ranch, which is kind of a
18 wilderness medicine setting, and we were basically
19 part of the first responders for that -- that camp.

20 I remember as a medical student running
21 up a mountain with a backpack with oxygen for a
22 gentleman that was having a heart attack on the top
23 of a mountain that got evacuated by a helicopter.
24 It's something I remember very vividly. So in that
25 sense, I was a medical student but I was performing

1 **the duties of a prehospital provider.**

2 Q. Okay. And when would that have
3 occurred?

4 A. That would have been 2 -- the summer of
5 **2000.**

6 Q. Other than that, any other experience
7 out in the field with EMS services, meaning like in
8 an ambulance, paramedic or EMT?

9 A. Not that I can recall.

10 Q. All right. I noted in your report that
11 you reviewed approved protocols, including those on
12 the management of excited delirium; is that
13 correct?

14 A. That's correct.

15 Q. Is that something you do for the
16 University of Kansas health system?

17 A. No. I am one of the physician members
18 on the Johnson County Board of EMS that takes the
19 recommendations from the medical director for the
20 EMS service and just basically makes sure that
21 everything seems okay. You know, we weren't the
22 voting body.

23 Q. So are you then the one that actually
24 puts together an administrative order? Do you know
25 what I'm talking when I say administrative order?

1 degree as a medical toxicologist. One is to -- as
2 an agent for procedural sedation, for instance,
3 when we have to reduce a fracture. And then the
4 other is for control of agitated patients.

5 Q. Okay. Then I notice here, it says also
6 that you're an associate professor and core faculty
7 member for University of Kansas Emergency Medicine
8 Residency, correct?

9 A. That is correct.

10 Q. All right. Is that for medical
11 students?

12 A. Actually, it's for medical residents,
13 so they've already finished medical cool. This is
14 a postgraduate training.

15 Q. Oh, that's another residency?

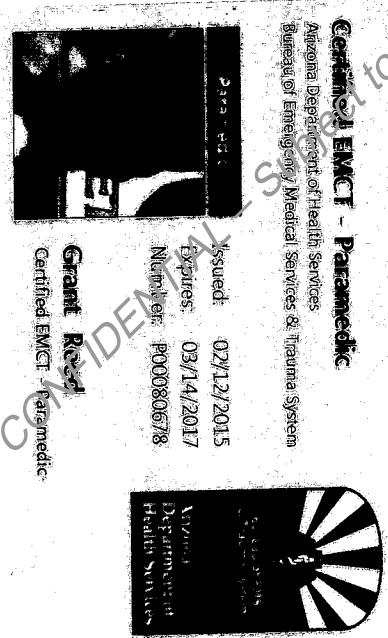
16 A. It is a residency, yes. It's an
17 emergency medicine residency at the University of
18 Kansas Hospital.

19 Q. Okay. Got it. I did want to ask you
20 on page 6 of your report, there's an article
21 referenced there that you were a coauthor of, and
22 the title is "Massive Iatrogenic" --

23 A. Iatrogenic.

24 Q. -- "Iatrogenic Pediatric Ketamine
25 Overdose with Serial Levels and Minimal Morbidity."

Exhibit C



Grant Reed
Certified EMCT - Paramedic

2-14-15m2

Certified EMCT - Paramedic

Arizona Department of Health Services

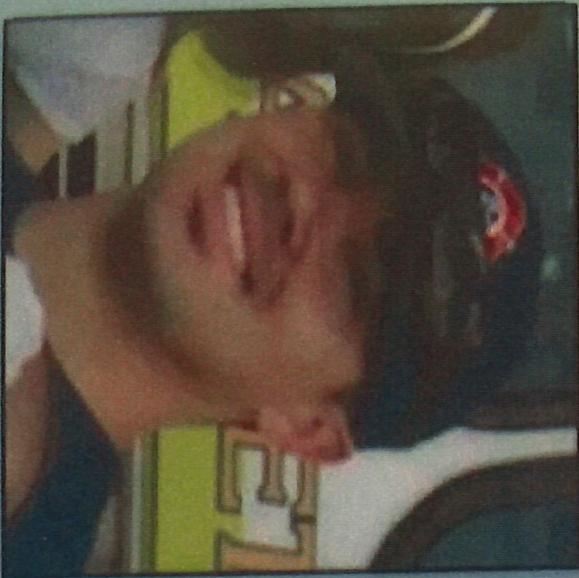
Bureau of Emergency Medical Services & Trauma System

Paramedic

Issued: 03/02/2017

Expires: 03/14/2019

Number: P00080678



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Bureau of EMS
& Trauma System

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Health Services



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